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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/783,831	02/14/2001	James D. Parsons	378-21-006	2590
7590 06/16/2004			EXAMINER	
KOPPEL & JACOBS Suite 107 555 St. Charles Drive Thousand Oaks, CA 91360			GOINS, DAVETTA WOODS	
			ART UNIT	PAPER NUMBER
			2632	<i>f</i>
DATE MAILED: 06/16/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/783,831

Applicant(s)

PARSONS, JAMES D.

Examiner

Davetta W. Goins

Art Unit

2632

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-58 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 38-42 is/are allowed.
- 6) ☒ Claim(s) 1-37 and 43-58 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3.4.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Art Unit: 2632

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed May 15, 2001 is missing from the file. A second copy is required for the Examiner to consider.

Allowable Subject Matter

2. Claims 38-42 are allowed.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-37, 43-50, and 52-57 are rejected under 35 U.S.C. 102(b) as being anticipated by Suzuki et al. (US Pat. 5,431,806).

In reference to claims 1, 2, 4, 52, Suzuki discloses a) the claimed oxidizable substrate, which is met by a oxygen electrode substrate/silicon oxide substrate (col. 5, lines 26-52; col. 6, lines 24-31), b) the claimed body to be secured to the substrate, which is met by the oxygen substrate bonded to a container substrate (body) (col. 5, lines 50-55), and c) the claimed reacted borosilicate mixture securing the body relative to the substrate by an oxide interface with the substrate, which is met by a Pyrex glass-containing borosilicate

Art Unit: 2632

glass formed on the surface thereof, a glass substrate having a lead glass film formed on the surface thereof, and a silicon substrate having a thermally oxidized film on the surface thereof (col. 6, lines 42-52).

In reference to claims 3, 5, 6, Suzuki discloses the claimed RBM between the body and the substrate is thin enough to be substantially thermally conductive and the body comprising a thermal sensor, which is met by a Pyrex glass-containing borosilicate glass formed on the surface thereof, a glass substrate having a lead glass film formed on the surface thereof, and a silicon substrate having a thermally oxidized film on the surface thereof (col. 6, lines 42-52).

In reference to claims 7, 8, Suzuki discloses the claimed body is oxidizable, and an oxide interface secures the RBM to the body, which is met by a silicon oxide film can be easily formed by thermal oxidation of the substrate (col. 6, lines 61-68).

In reference to claims 9, 10, 34, 49, 50, 53, 54, 56, 57, Suzuki discloses the claimed RBM comprising a reacted mixture of B_2O_3 and SiO_2 , with the B_2O_3 at least 50wt.% of the mixture, which is met by a Pyrex glass-containing borosilicate glass formed on the surface thereof, a glass substrate having a lead glass film formed on the surface thereof, and a silicon substrate having a thermally oxidized film on the surface thereof (col. 6, lines 42-52; col. 9, lines 27-68; col. 15, lines 45-68).

Art Unit: 2632

In reference to claim 11, Suzuki discloses the claimed environment sensor having an electrical output, which is met by temperature sensor (col. 21, lines 40-68).

In reference to claims 12-15, 17-22, 31-33, 35-37, 43-48, 55, Suzuki discloses the claimed at least one lead wire for the sensor secured relative to the substrate by a lead wire RBM along at least a portion of its length, which is met by a planar substrate 303 having thin film conductor lines 302 and a pattern of a thin film resistor as a temperature sensing portion 301 (col. 21, lines 40-68). A protecting planar substrate 304 is bonded to the carrying planar substrate 303 to cover the temperature sensing portion 301. The protecting planar substrate 304 is made of silicon such as the silicon substrate having a film of a Pyrex glass-containing borosilicate glass formed on the surface thereof, a glass substrate having a lead glass film formed on the surface thereof, and a silicon substrate having a thermally oxidized film on the surface thereof (col. 6, lines 42-52; col. 22, lines 4-18).

In reference to claims 16, 23, Suzuki discloses the claimed plurality of lead wires, which is met by film conductor lines 302 (col. 49-56; Figure 19).

In reference to claims 17, 24, Suzuki discloses the claimed lead wire RBM insulating the lead wires from each other, which is met by the silicon substrate including an insulating layer such as silicon dioxide inserted between the resistor and the silicon substrate (col. 22, lines 48-58).

Art Unit: 2632

In reference to claims 18, 19, 25-27, Suzuki discloses the claimed lead wires disposed on a single common level relative to the substrate, which is met by a single silicon crystal (col. 22, lines 48-58).

In reference to claims 28-30, Suzuki discloses the claimed terminal block for the lead wires, which is met by the conducting lines 302 completely seated in grooves (col. 22, lines 1-18).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 51 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al..

In reference to claims 51, 58, although Suzuki does not specifically disclose the claimed BM reacted at a temperature greater than 460 degrees Celsius, he does disclose the method of baking a substrate at various temperatures from 50° C, 120° C, 150° C, and 280° C within various time frames (col. 13, lines 19-68; col. 14, lines 1-30; col. 15, lines 65-68). Since Suzuki discloses the method of heating the substrate to a specific temperature, it would have been obvious to one of ordinary skill in the art at the time of

Art Unit: 2632

the invention to heat the substrate to any wanted temperature to ensure that the substrate is properly bonded

7. The prior art of record and not relied upon is considered pertinent to the applicant's disclosure as follows. Parsons (US Pat. 6,576,972 B1) and Sakaguchi et al. (US Pat. 6,613,678 B1), which disclose the process of manufacturing substrates.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Davetta W. Goins whose telephone number is 703-306-2761. The examiner can normally be reached on Mon-Fri with every other Fri. off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Wu can be reached on 703-308-6730. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2632

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DAVETTA W. GOINS
PRIMARY EXAMINER



D.W.G.
June 10, 2004

Davetta W. Goins
Primary Examiner
Art Unit 2632